

s nonionic(5a)graft

39894 NONIONIC  
2000 NONIONICS  
40064 NONIONIC  
(NONIONIC OR NONIONICS)  
25876 GRAFT  
5669 GRAFTS  
27967 GRAFT  
(GRAFT OR GRAFTS)  
L3 53 NONIONIC(5A)GRAFT

set high off

SET COMMAND COMPLETED

=> s ink

55877 INK  
20137 INKS  
L4 61819 INK  
(INK OR INKS)

=> s ink jet

55877 INK  
20137 INKS  
61819 INK  
(INK OR INKS)  
84264 JET  
28044 JETS  
95768 JET  
(JET OR JETS)  
L5 11969 INK JET  
(INK(W)JET)

set high on

SET COMMAND COMPLETED

=> s graft and 15

25876 GRAFT  
5669 GRAFTS  
27967 GRAFT  
(GRAFT OR GRAFTS)  
L6 287 GRAFT AND L5

=> s graft(5a)(copolymer) and 15

25876 GRAFT  
5669 GRAFTS  
(GRAFT OR GRAFTS)  
120636 COPOLYMER  
113526 COPOLYMERS  
158776 COPOLYMER  
(COPOLYMER OR COPOLYMERS)  
12111 GRAFT(5A)(COPOLYMER)

L7 172 GRAFT(5A) (COPOLYMER) AND L5

=> s 17 and hydrophobic and hydrophilic

53477 HYDROPHOBIC

18 HYDROPHOBICS

53480 HYDROPHOBIC

(HYDROPHOBIC OR HYDROPHOBICS)

23 HYDROPHILIC

L8 0 L7 AND HYDROPHOBIC AND HYDROPHILIC

s 17 and hydrophobic and hydrophilic

53477 HYDROPHOBIC

18 HYDROPHOBICS

53480 HYDROPHOBIC

(HYDROPHOBIC OR HYDROPHOBICS)

56079 HYDROPHILIC

22 HYDROPHILICS

56081 HYDROPHILIC

(HYDROPHILIC OR HYDROPHILICS)

L9 49 L7 AND HYDROPHOBIC AND HYDROPHILIC

s graft(5a)copolymer

25876 GRAFT

5669 GRAFTS

27967 GRAFT

(GRAFT OR GRAFTS)

120636 COPOLYMER

113526 COPOLYMERS

158776 COPOLYMER

(COPOLYMER OR COPOLYMERS)

L10 12111 GRAFT(5A)COPOLYMER

=> s 110 and 14

s 111 and hydrophobic and hydrophilic

53477 HYDROPHOBIC

18 HYDROPHOBICS

53480 HYDROPHOBIC

(HYDROPHOBIC OR HYDROPHOBICS)

0 HYDROPHILIC

L12 0 L11 AND HYDROPHOBIC AND HYDROPHILIC

=> s 111 and hydrophobic and hydrophilic

53477 HYDROPHOBIC

18 HYDROPHOBICS

53480 HYDROPHOBIC

(HYDROPHOBIC OR HYDROPHOBICS)

56079 HYDROPHILIC

56081 HYDROPHILIC

(HYDROPHILIC OR HYDROPHILICS)

L13 185 L11 AND HYDROPHOBIC AND HYDROPHILIC

=> s 113 not 19

L14 136 L13 NOT L9

s 114 and ink/ti

```

        6842 INK/TI
        520 INKS/TI
        7243 INK/TI
            ((INK OR INKS)/TI)
L15      0 L14 AND INK/TI

=> s 113 and textile

        40564 TEXTILE
        12792 TEXTILES
        46364 TEXTILE
            (TEXTILE OR TEXTILES)

s hydrophobic(p)graft

        53477 HYDROPHOBIC
        18 HYDROPHOBICS
        53480 HYDROPHOBIC
            (HYDROPHOBIC OR HYDROPHOBICS)
- 25876 GRAFT
        5669 GRAFTS
        27967 GRAFT
            (GRAFT OR GRAFTS)
L17      760 HYDROPHOBIC(P)GRAFT

=> s hydrophilic(p)graft

        56079 HYDROPHILIC
        22 HYDROPHILICS
        56081 HYDROPHILIC
            (HYDROPHILIC OR HYDROPHILICS)

        5669 GRAFTS
- 27967 GRAFT
            (GRAFT OR GRAFTS)
L18      2350 HYDROPHILIC(P)GRAFT

=> s 14 and 117 and 118

L19      66 L4 AND L17 AND L18

=> s 119 not 19

L20      42 L19 NOT L9

s binder(10a)graft

        97118 BINDER
        54415 BINDERS
        118685 BINDER
            (BINDER OR BINDERS)
        25876 GRAFT
        5669 GRAFTS
        27967 GRAFT
            (GRAFT OR GRAFTS)

s 121 and 15

L22      7 L21 AND L5

s 121 and 14

L23      107 L21 AND L4

```

---

s nonionic(5a)graft

39894 NONIONIC  
2000 NONIONICS  
40064 NONIONIC  
(NONIONIC OR NONIONICS)  
25876 GRAFT  
5669 GRAFTS  
27967 GRAFT  
(GRAFT OR GRAFTS)

L3 53 NONIONIC(5A)GRAFT

set high off

SET COMMAND COMPLETED

=> s ink

55877 INK  
20137 INKS  
L4 61819 INK  
(INK OR INKS)

=> s ink jet

55877 INK  
20137 INKS  
61819 INK  
(INK OR INKS)  
84264 JET  
28044 JETS  
95768 JET  
(JET OR JETS)  
L5 11969 INK JET  
(INK(W)JET)

set high on

SET COMMAND COMPLETED

=> s graft and l5

25876 GRAFT  
5669 GRAFTS  
27967 GRAFT  
(GRAFT OR GRAFTS)  
L6 287 GRAFT AND L5

=> s graft(5a)(copolymer) and l5

25876 GRAFT  
5669 GRAFTS  
(GRAFT OR GRAFTS)  
120636 COPOLYMER  
113526 COPOLYMERS  
158776 COPOLYMER  
(COPOLYMER OR COPOLYMERS)  
12111 GRAFT(5A)(COPOLYMER)

L7 172 GRAFT(5A) (COPOLYMER) AND L5

=> s 17 and hydrophobic and hydrohiliC

53477 HYDROPHOBIC  
18 HYDROPHOBICS  
53480 HYDROPHOBIC  
(HYDROPHOBIC OR HYDROPHOBICS)  
23 HYDROHILIC  
L8 0 L7 AND HYDROPHOBIC AND HYDROHILIC

s 17 and hydrophobic and hydrophilic

53477 HYDROPHOBIC  
18 HYDROPHOBICS  
53480 HYDROPHOBIC  
(HYDROPHOBIC OR HYDROPHOBICS)  
56079 HYDROPHILIC  
22 HYDROPHILICS  
56081 HYDROPHILIC  
(HYDROPHILIC OR HYDROPHILICS)

L9 49 L7 AND HYDROPHOBIC AND HYDROPHILIC

s graft(5a)copolymer

25876 GRAFT  
5669 GRAFTS  
27967 GRAFT  
(GRAFT OR GRAFTS)  
120636 COPOLYMER  
113526 COPOLYMERS  
158776 COPOLYMER  
(COPOLYMER OR COPOLYMERS)

L10 12111 GRAFT(5A)COPOLYMER

=> s 110 and 14

s 111 and hydrophobic and hydroohilic

53477 HYDROPHOBIC  
18 HYDROPHOBICS  
53480 HYDROPHOBIC  
(HYDROPHOBIC OR HYDROPHOBICS)  
0 HYDROOHILIC  
L12 0 L11 AND HYDROPHOBIC AND HYDROOHILIC

=> s 111 and hydrophobic and hydrophilic

53477 HYDROPHOBIC  
18 HYDROPHOBICS  
53480 HYDROPHOBIC  
(HYDROPHOBIC OR HYDROPHOBICS)  
56079 HYDROPHILIC

56081 HYDROPHILIC  
(HYDROPHILIC OR HYDROPHILICS)

L13 185 L11 AND HYDROPHOBIC AND HYDROPHILIC

=> s 113 not 19

L14 136 L13 NOT L9

s 114 and ink/ti

6842 INK/TI  
520 INKS/TI  
7243 INK/TI  
((INK OR INKS)/TI)  
L15 0 L14 AND INK/TI

=> s l13 and textile

40564 TEXTILE  
12792 TEXTILES  
46364 TEXTILE  
(TEXTILE OR TEXTILES)

s hydrophobic(p)graft

53477 HYDROPHOBIC  
18 HYDROPHOBICS  
53480 HYDROPHOBIC  
(HYDROPHOBIC OR HYDROPHOBICS)  
25876 GRAFT  
5669 GRAFTS  
27967 GRAFT  
(GRAFT OR GRAFTS)  
L17 760 HYDROPHOBIC(P)GRAFT

=> s hydrophilic(p)graft

56079 HYDROPHILIC  
22 HYDROPHILICS  
56081 HYDROPHILIC  
(HYDROPHILIC OR HYDROPHILICS)  
5669 GRAFTS  
27967 GRAFT  
(GRAFT OR GRAFTS)  
L18 2350 HYDROPHILIC(P)GRAFT

=> s l4 and l17 and l18

L19 66 L4 AND L17 AND L18

=> s l19 not l9

L20 42 L19 NOT L9

s binder(10a)graft

97118 BINDER  
54415 BINDERS  
118685 BINDER  
(BINDER OR BINDERS)  
25876 GRAFT  
5669 GRAFTS  
27967 GRAFT  
(GRAFT OR GRAFTS)

s l21 and l5

L22 7 L21 AND L5

s l21 and l4

L23 107 L21 AND L4

---

s (ethoxytriethylene glycol methacrylate or  
methoxypolyethylene(w)oxide(w) (methacrylate or acrylate) or  
polyethyleneoxide(w) (acrylate or methacrylate) or vinyl(w)pyrrolidone)

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    28 ETHOXYTRIETHYLENE
164167 GLYCOL
    51903 GLYCOLS
173964 GLYCOL
        (GLYCOL OR GLYCOLS)
    66488 METHACRYLATE
    18297 METHACRYLATES
    70321 METHACRYLATE
        (METHACRYLATE OR METHACRYLATES)
    21 ETHOXYTRIETHYLENE GLYCOL METHACRYLATE
        (ETHOXYTRIETHYLENE (W) GLYCOL (W) METHACRYLATE)
    795 METHOXYPOLYETHYLENE
324331 OXIDE
126631 OXIDES
352236 OXIDE
        (OXIDE OR OXIDES)
    66488 METHACRYLATE
    18297 METHACRYLATES
    70321 METHACRYLATE
        (METHACRYLATE OR METHACRYLATES)
    68864 ACRYLATE
    27789 ACRYLATES
    75234 ACRYLATE
        (ACRYLATE OR ACRYLATES)
    0 METHOXYPOLYETHYLENE (W) OXIDE (W) (METHACRYLATE OR ACRYLATE)
    1119 POLYETHYLENEOXIDE
    118 POLYETHYLENEOXIDES
    1214 POLYETHYLENEOXIDE
        (POLYETHYLENEOXIDE OR POLYETHYLENEOXIDES)
    68864 ACRYLATE
    27789 ACRYLATES
    75234 ACRYLATE
        (ACRYLATE OR ACRYLATES)
    66488 METHACRYLATE
    18297 METHACRYLATES
    70321 METHACRYLATE
        (METHACRYLATE OR METHACRYLATES)
    2 POLYETHYLENEOXIDE (W) (ACRYLATE OR METHACRYLATE)
155294 VINYL
    2022 VINYL
155969 VINYL
        (VINYL OR VINYL)
    34878 PYRROLIDONE
    2065 PYRROLIDONES
    35771 PYRROLIDONE
        (PYRROLIDONE OR PYRROLIDONES)
    7151 VINYL (W) PYRROLIDONE
    7171 (ETHOXYTRIETHYLENE GLYCOL METHACRYLATE OR METHOXYPOLYETHYLE
L1      W) OXIDE (W) (METHACRYLATE OR ACRYLATE) OR POLYETHYLENEOXIDE (W
NE(
    ) (A
        CRYLATE OR METHACRYLATE) OR VINYL (W) PYRROLIDONE)

=> s hydrophilic(p)l1

    56079 HYDROPHILIC
    22 HYDROPHILICS
    56081 HYDROPHILIC
        (HYDROPHILIC OR HYDROPHILICS)
L2      1320 HYDROPHILIC (P) L1

=> set high off

```

SET COMMAND COMPLETED

=> s ink jet

55877 INK  
20137 INKS  
61819 INK  
          (INK OR INKS)  
84264 JET  
28044 JETS  
95768 JET  
          (JET OR JETS)  
L3      11969 INK JET  
          (INK(W)JET)

=> set high on

SET COMMAND COMPLETED

=> s 12 and 13

L4          73 L2 AND L3

=> d 14 kwic

US PAT NO:      5,897,961 [IMAGE AVAILABLE]

L4: 1 of 73

SUMMARY:

BSUM(40)

There . . . Pat. No. 5,569,529 ink jet printing materials comprised of a support and an ink receiving layer containing a pigment, a **hydrophilic** binder comprising polyvinyl alcohol, vinylpyrrolidone homopolymer and/or **vinyl pyrrolidone** copolymer, and a water soluble compound containing aldehyde groups.

CLAIMS:

CLMS(6)

6. A coated ink jet paper in accordance with claim 1 wherein the **hydrophilic** polymeric binder is present in amounts of from about 5 parts by weight to about 70 parts by weight, and which binder is selected from the group consisting of (1) poly(vinyl alcohol), (2) poly(vinyl phosphate), (3) poly(**vinyl pyrrolidone**), (4) **vinyl pyrrolidone**-vinyl acetate copolymers, (5) **vinyl pyrrolidone**-styrene copolymers, (6) poly(vinylamine), (7) poly(vinyl alcohol) ethoxylated, (8) poly(**vinyl pyrrolidone**-diethylaminomethylmethacrylate), (9) vinyl alcohol-vinyl acetate copolymer, (10) vinyl alcohol-vinylbutyral copolymer, (11) melamine-formaldehyde resin, (12) urea-formaldehyde resin, (13) methylated urea-formaldehyde resins, (14).

=> s hydrohobic(p) (acrylate or methacrylate)

65 HYDROHOBIC  
68864 ACRYLATE  
27789 ACRYLATES  
75234 ACRYLATE  
          (ACRYLATE OR ACRYLATES)  
66488 METHACRYLATE  
18297 METHACRYLATES  
70321 METHACRYLATE  
          (METHACRYLATE OR METHACRYLATES)



L5

0 HYDROPHOBIC(P) (ACRYLATE OR METHACRYLATE)

=> s hydrophobic(p) (acrylate or methacrylate)

53477 HYDROPHOBIC

18 HYDROPHOBICS

53480 HYDROPHOBIC

(HYDROPHOBIC OR HYDROPHOBICS)

68864 ACRYLATE

27789 ACRYLATES

75234 ACRYLATE

(ACRYLATE OR ACRYLATES)

66488 METHACRYLATE

18297 METHACRYLATES

70321 METHACRYLATE

(METHACRYLATE OR METHACRYLATES)

L6 3580 HYDROPHOBIC(P) (ACRYLATE OR METHACRYLATE)

s l6 and l4

L7 15 L6 AND L4

s graft(p) (polymer or copolymer)

25876 GRAFT

5669 GRAFTS

27967 GRAFT

(GRAFT OR GRAFTS)

236231 POLYMER

187981 POLYMERS

280054 POLYMER

(POLYMER OR POLYMERS)

120636 COPOLYMER

113526 COPOLYMERS

158776 COPOLYMER

(COPOLYMER OR COPOLYMERS)

L8 19017 GRAFT(P) (POLYMER OR COPOLYMER)

s l8 and l7

s ink(p)textile(p)wash?

55877 INK

20137 INKS

61819 INK

(INK OR INKS)

40564 TEXTILE

12792 TEXTILES

46364 TEXTILE

(TEXTILE OR TEXTILES)

407956 WASH?

L10 139 INK(P)TEXTILE(P)WASH?

s l10 and l8

L11 6 L10 AND L8

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* * * * *
*       U. S.   P A T E N T   T E X T   F I L E
*
*   THE WEEKLY PATENT TEXT AND IMAGE DATA IS CURRENT
*   THROUGH APRIL 27, 1999.
*
* * * * *

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=> e page, loretta ann grezzo/pn

'PAGE, LORETTA ANN GREZZO' IS NOT A VALID NUMERIC VALUE

=> e page, loretta ann grezzo/in

E#	FILE	FREQUENCY	TERM
E1	USPAT	6	PAGE, LORETTA A G/IN
E2	USPAT	2	PAGE, LORETTA ANN G/IN
E3	USPAT	1 -->	PAGE, LORETTA ANN GREZZO/IN
E4	USPAT	5	PAGE, LOUIS J/IN
E5	USPAT	1	PAGE, LUCILLE A/IN
E6	USPAT	1	PAGE, MARIE L/IN
E7	USPAT	4	PAGE, MARK/IN
E8	USPAT	1	PAGE, MARK A/IN
E9	USPAT	1	PAGE, MARTIN/IN
E10	USPAT	5	PAGE, MARTIN J/IN
E11	USPAT	2 ---	PAGE, MARY-J/IN
E12	USPAT	3	PAGE, MATTHEW A/IN

=> s e1 or e2 or e3

```

        6 "PAGE, LORETTA A G"/IN
        2 "PAGE, LORETTA ANN G"/IN
        1 "PAGE, LORETTA ANN GREZZO"/IN
L1      9 "PAGE, LORETTA A G"/IN OR "PAGE, LORETTA ANN G"/IN OR "PAGE
, L      ORETTA ANN GREZZO"/IN

```

=> d l1 1-9 ti,pn

US PAT NO: 5,750,594 [IMAGE AVAILABLE] L1: 1 of 9  
 TITLE: Ink set and process for alleviating bleed in printed elements

US PAT NO: 5,518,534 [IMAGE AVAILABLE] L1: 2 of 9  
 TITLE: Ink set and process for alleviating bleed in printed elements

US PAT NO: 5,254,427 [IMAGE AVAILABLE] L1: 3 of 9  
 TITLE: Additives for liquid electrostatic developers

US PAT NO: 5,130,221 [IMAGE AVAILABLE] L1: 4 of 9  
 TITLE: Salts of acid-containing AB diblock copolymers as charge directors for positive-working electrostatic liquid developers

US PAT NO: 5,053,306 [IMAGE AVAILABLE] L1: 5 of 9  
 TITLE: Acid-containing A-B block copolymers as grinding aids in

liquid electrostatic developer preparation

US PAT NO: 5,035,972 [IMAGE AVAILABLE] L1: 6 of 9  
TITLE: AB diblock copolymers as charge directors for negative electrostatic liquid developer

US PAT NO: 5,002,848 [IMAGE AVAILABLE] L1: 7 of 9  
TITLE: Substituted carboxylic acids as adjuvants for positive electrostatic liquid developers

US PAT NO: 4,957,844 [IMAGE AVAILABLE] L1: 8 of 9  
TITLE: Liquid electrostatic developer containing multiblock polymers

US PAT NO: 4,750,443 [IMAGE AVAILABLE] L1: 9 of 9  
TITLE: Fire-blocking textile fabric

=> e pearlstone, kathryn/in

E#	FILE	FREQUENCY	TERM
E1	USPAT	2	PEARLSTEIN, ROBERT S/IN
E2	USPAT	6	PEARLSTEIN, RONALD M/IN
E3	USPAT	1 -->	PEARLSTINE, KATHRYN/IN
E4	USPAT	8	PEARLSTINE, KATHRYN A/IN
E5	USPAT	1	PEARLSTINE, KATHRYN AMY/IN
E6	USPAT	4	PEARMAN, DOUGLAS S/IN
E7	USPAT	-2	PEARMAN, KEVIN E/IN
E8	USPAT	6	PEARMAN, A NOEL J/IN
E9	USPAT	6	PEARMAN, ARTHUR N J/IN
E10	USPAT	1	PEARMAN, ARTHUR WILLIAM/IN
E11	USPAT	2	PEARMAN, BRUCE W/IN
E12	USPAT	1	PEARMAN, DAVID J/IN

=> s e4 or e5

8 "PEARLSTINE, KATHRYN A"/IN  
1 "PEARLSTINE, KATHRYN AMY"/IN  
L2 9 "PEARLSTINE, KATHRYN A"/IN OR "PEARLSTINE, KATHRYN AMY"/IN

=> d l2 1-9 ti,pn

US PAT NO: 5,750,594 [IMAGE AVAILABLE] L2: 1 of 9  
TITLE: Ink set and process for alleviating bleed in printed elements

US PAT NO: 5,518,534 [IMAGE AVAILABLE] L2: 2 of 9  
TITLE: Ink set and process for alleviating bleed in printed elements

US PAT NO: 5,471,287 [IMAGE AVAILABLE] L2: 3 of 9  
TITLE: System for replenishing liquid electrostatic developer

US PAT NO: 5,382,492 [IMAGE AVAILABLE] L2: 4 of 9  
TITLE: Quaternary ammonium compound as charge adjuvants for positive electrostatic liquid developers

US PAT NO: 5,290,653 [IMAGE AVAILABLE] L2: 5 of 9  
TITLE: Block copolymer amine salts as charge directors for

negative electrostatic liquid developer

US PAT NO: 5,206,107 [IMAGE AVAILABLE] L2: 6 of 9  
TITLE: Siloxane surfactants as liquid developer additives

US PAT NO: 5,066,821 [IMAGE AVAILABLE] L2: 7 of 9  
TITLE: Process for preparing positive electrostatic liquid developers with acidified charge directors

US PAT NO: 5,034,299 [IMAGE AVAILABLE] L2: 8 of 9  
TITLE: Mineral acids as charge adjuvants for positive liquid electrostatic developers

US PAT NO: 5,002,848 [IMAGE AVAILABLE] L2: 9 of 9  
TITLE: Substituted carboxylic acids as adjuvants for positive electrostatic liquid developers

=> s nonionic(5a)graft

39894 NONIONIC  
2000 NONIONICS  
40064 NONIONIC  
(NONIONIC OR NONIONICS)  
25876 GRAFT  
5669 GRAFTS  
27967 GRAFT  
(GRAFT OR GRAFTS)

L3 53 NONIONIC (5A) GRAFT

=> d 13 kwic

US PAT NO: 5,879,582 [IMAGE AVAILABLE] L3: 1 of 53

SUMMARY:

BSUM(74)

The . . . ester, amide, or mixed ester-amide dispersants based on polyisobutenyl succinic anhydride, dispersants based on polyisobutyl phenol, ABA type block copolymer **nonionic** dispersants, acrylic **graft** copolymers, octylphenoxyethoxyethanol, nonylphenoxyethoxyethanol, alkyl aryl ethers, alkyl aryl polyethers, amine polyglycol condensates, modified polyethoxy adducts, modified terminated alkyl aryl ethers, . . .

=> d 13 2-10 kwic

US PAT NO: 5,851,429 [IMAGE AVAILABLE] L3: 2 of 53

DETDESC:

DETD(52)

Further . . . ester, amide, or mixed ester-amide dispersants based on polyisobutenyl succinic anhydride, dispersants based on polyisobutyl phenol, ABA type block copolymer **nonionic** dispersants, acrylic **graft** copolymers, octylphenoxyethoxyethanol, nonylphenoxyethoxyethanol, alkyl aryl ethers, alkyl aryl polyethers,

dressings

US PAT NO: 3,669,915 [IMAGE AVAILABLE] L3: 53 of 53  
TITLE: FLOCCULANTS FROM STARCH GRAFT COPOLYMERS

=> set high off

SET COMMAND COMPLETED

=> s ink

55877 INK  
20137 INKS  
L4 61819 INK  
(INK OR INKS)

=> s ink jet

55877 INK  
20137 INKS  
61819 INK  
(INK OR INKS)  
84264 JET  
28044 JETS  
95768 JET  
(JET OR JETS)  
L5 11969 INK JET  
(INK(W)JET)

=> set high ofn

'OFN' IS NOT A VALID SET VALUE

=> set high on

SET COMMAND COMPLETED

=> s graft and l5

25876 GRAFT  
5669 GRAFTS  
27967 GRAFT  
(GRAFT OR GRAFTS)  
L6 287 GRAFT AND L5

=> s graft(5a)(copolymer) and l5

25876 GRAFT  
5669 GRAFTS  
27967 GRAFT  
(GRAFT OR GRAFTS)  
120636 COPOLYMER  
113526 COPOLYMERS  
158776 COPOLYMER  
(COPOLYMER OR COPOLYMERS)  
12111 GRAFT(5A)(COPOLYMER)  
L7 172 GRAFT(5A)(COPOLYMER) AND L5

=> s 17 and hydrophobic and hydrohilic

53477 HYDROPHOBIC  
18 HYDROPHOBICS  
53480 HYDROPHOBIC  
(HYDROPHOBIC OR HYDROPHOBICS)  
23 HYDROHILIC  
L8 0 L7 AND HYDROPHOBIC AND HYDROHILIC

=> s 17 and hydrophobic and hydrophilic

53477 HYDROPHOBIC  
18 HYDROPHOBICS  
53480 HYDROPHOBIC  
(HYDROPHOBIC OR HYDROPHOBICS)  
56079 HYDROPHILIC  
22 HYDROPHILICS  
56081 HYDROPHILIC  
(HYDROPHILIC OR HYDROPHILICS)  
L9 49 L7 AND HYDROPHOBIC AND HYDROPHILIC

=> d 19 1-49 ti

US PAT NO:	5,897,940 [IMAGE AVAILABLE]	L9: 1 of 49
TITLE:	Ink jet transparencies	
US PAT NO:	5,888,629 [IMAGE AVAILABLE]	L9: 2 of 49
TITLE:	Ink jet recording medium	
US PAT NO:	5,885,678 [IMAGE AVAILABLE]	L9: 3 of 49
TITLE:	Coated labels	
US PAT NO:	5,883,157 [IMAGE AVAILABLE]	L9: 4 of 49
TITLE:	Ink jet recording ink and ink jet recording method	
US PAT NO:	5,869,564 [IMAGE AVAILABLE]	L9: 5 of 49
TITLE:	Ink composition	
US PAT NO:	5,854,308 [IMAGE AVAILABLE]	L9: 6 of 49
TITLE:	Water-based pigmented inks having silicone-containing polymer incorporated therein	
US PAT NO:	5,852,075 [IMAGE AVAILABLE]	L9: 7 of 49
TITLE:	Surfactant system for ink jet inks for printing on <b>hydrophobic</b> surfaces	
US PAT NO:	5,795,696 [IMAGE AVAILABLE]	L9: 8 of 49
TITLE:	Laminatable backing substrates containing paper desizing agents	
US PAT NO:	5,744,273 [IMAGE AVAILABLE]	L9: 9 of 49
TITLE:	Laminatable backing substrates containing fluoro compounds for improved toner flow	
US PAT NO:	5,735,941 [IMAGE AVAILABLE]	L9: 10 of 49
TITLE:	Ink system with reduced bleed	
US PAT NO:	5,721,330 [IMAGE AVAILABLE]	L9: 11 of 49
TITLE:	<del>Macromonomers with high acid content and their method of</del> preparation	

actually be detrimental at the release pH.

DETDISC:

<-----User Break----->

u

This example illustrates solution polymerization synthesis of complexing graft copolymer emulsifiers and thickeners according to the present invention which contain reversible hydrophobic functionalities synthesized by the free radical polymerization of  
=> d his

(FILE 'USPAT' ENTERED AT 13:23:17 ON 30 APR 1999)

L1            9 S E1 OR E2 OR E3  
             E PEARLSTINE, KATHRYN/IN  
L2            9 S E4 OR E5  
L3            53 S NONIONIC(5A)GRAFT  
             SET HIGH OFF  
L4            61819 S INK  
L5            11969 S INK JET  
             SET HIGH ON  
L6            287 S GRAFT AND L5  
L7            172 S GRAFT(5A)(COPOLYMER) AND L5  
L8            0 S L7 AND HYDROPHOBIC AND HYDROHILIC  
L9            49 S L7-AND HYDROPHOBIC AND HYDROPHILIC  
L10           12111 S GRAFT(5A)COPOLYMER  
L11           998 S L10 AND L4  
L12           0 S L11 AND HYDROPHOBIC AND HYDROOHILIC  
L13           185 S L11 AND HYDROPHOBIC AND HYDROPHILIC  
L14           136 S L13 NOT L9  
L15           0 S L14 AND INK/TI  
L16           34 S L13 AND TEXTILE

=> s hydrophobic(p)graft

53477 HYDROPHOBIC  
18 HYDROPHOBICS  
53480 HYDROPHOBIC  
          (HYDROPHOBIC OR HYDROPHOBICS)  
25876 GRAFT  
5669 GRAFTS  
27967 GRAFT  
          (GRAFT OR GRAFTS)  
L17           760 HYDROPHOBIC(P)GRAFT

=> s hydrophilic(p)graft

56079 HYDROPHILIC  
22 HYDROPHILICS  
56081 HYDROPHILIC  
          (HYDROPHILIC OR HYDROPHILICS)  
25876 GRAFT  
5669 GRAFTS  
27967 GRAFT  
          (GRAFT-OR-GRAFTS)  
L18           2350 HYDROPHILIC(P)GRAFT

=> s 14 and 117 and 118

L19            66 L4 AND L17 AND L18

=> s 119 not 19

L20            42 L19 NOT L9

=> d 120 kwic

US PAT NO:        5,851,590 [IMAGE AVAILABLE]

L20: 1 of 42

DETDESC:

DETD(16)

The . . . areas based on functionality of the monomers contained within the segment or area. Examples of structured polymers include block polymers, **graft** polymers, tapered polymers and branch polymers. Particularly preferred structured polymeric dispersants for use in the present invention include AB, BAB and ABC block copolymers. In AB or BAB block copolymers the A segment is a **hydrophobic** (i.e., water insoluble) homopolymer or copolymer which serves to link with the colorant and the B block is a **hydrophilic** (i.e., water soluble) homopolymer or copolymer, or salts thereof, and serves to disperse the colorant in the aqueous medium. Such. . .

=> d 120 2-10 kwic

US PAT NO:        5,844,039 [IMAGE AVAILABLE]

L20: 2 of 42

SUMMARY:

BSUM(4)

Polymeric . . . limited to, aqueous cleaning operations, suspension polymerization, food applications, cosmetics, pharmacy, agriculture and bitumen processing. The emulsifiers generally contain both **hydrophilic** and **hydrophobic** groups, giving the polymer an "amphipathic" character. Examples of such polymeric emulsifiers and their properties are described in standard texts such as Irja Pirma, Polymeric Surfactants, Marcel Dekker, 1992. This text summarizes an extensive body of literature regarding **hydrophilic/hydrophobic** diblock, triblock, **graft** and random copolymers. Specific examples of polymeric emulsifiers are provided in Great Britain Patent GB 2,115,002A to Baker (1983), which discloses block or **graft** copolymers of **hydrophobic** monomers with **hydrophilic** monomers. U.S. Pat. No. 5,021,526 to Ball, describes random terpolymer emulsifiers made from water-soluble vinyl monomers, water-insoluble vinyl monomers containing. . . ACS Symposium Series, Vol. 462, 101 (1991). In all of these examples, the molecular structure of the emulsifier contains both **hydrophobic** and **hydrophilic** groups to achieve an amphipathic nature. In general, the **hydrophilic** groups may be anionic, cationic or nonionic in nature. Multiblock copolymer architectures have not been used in practice as emulsifiers,. . .

DETDESC:



s hydrophilic(40a)(ethoxytriethylene(w)glycol(w)methacrylate or methoxypolyethylene(w)oxide(w)(acrylate or methacrylate) or (polyethyleneoxide(w)(acrylate or methacrylate)))

11 FILES SEARCHED...

L1 3 HYDROPHILIC(40A)(ETHOXYTRIETHYLENE(W) GLYCOL(W) METHACRYLATE  
OR METHOXYPOLYETHYLENE(W) OXIDE(W)(ACRYLATE OR METHACRYLATE) OR  
(POLYETHYLENEOXIDE(W)(ACRYLATE OR METHACRYLATE)))

=> s hydrophilic(50a)(ethoxytriethylene(w)glycol(w)methacrylate or methoxypolyethylene(w)oxide(w)(acrylate or methacrylate) or (polyethyleneoxide(w)(acrylate or methacrylate)))

L2 3 HYDROPHILIC(50A)(ETHOXYTRIETHYLENE(W) GLYCOL(W) METHACRYLATE  
OR METHOXYPOLYETHYLENE(W) OXIDE(W)(ACRYLATE OR METHACRYLATE) OR  
(POLYETHYLENEOXIDE(W)(ACRYLATE OR METHACRYLATE)))

=> d 12 1-3 pn

L2 ANSWER 1 OF 3 USPATFULL  
PI US 5674346 19971007

L2 ANSWER 2 OF 3 USPATFULL  
PI US 5519085 19960521

L2 ANSWER 3 OF 3 USPATFULL  
PI US 5480717 19960102

=> s (ethoxytriethylene(w)glycol(w)methacrylate or methoxypolyethylene(w)oxide(w)(acrylate or methacrylate) or (polyethyleneoxide(w)(acrylate or methacrylate)))

11 FILES SEARCHED...

L3 41 (ETHOXYTRIETHYLENE(W) GLYCOL(W) METHACRYLATE OR  
METHOXYPOLYETHYL  
ENE(W) OXIDE(W)(ACRYLATE OR METHACRYLATE) OR  
(POLYETHYLENEOXIDE(  
W)(ACRYLATE OR METHACRYLATE)))

=> s graft(10a)(polymer or copolymer)

9 FILES SEARCHED...

L4 55036 GRAFT(10A)(POLYMER OR COPOLYMER)

=> s 13 and 14

L5 8 L3 AND L4

=> d 15 1-8 pn

L5 ANSWER 1 OF 8 CAPLUS COPYRIGHT 1999 ACS  
PATENT NO. KIND DATE

PI WO-9844058 A1 19981008

L5 ANSWER 2 OF 8 CAPLUS COPYRIGHT 1999 ACS  
PATENT NO. KIND DATE

PI EP 851014 A2 19980701  
EP 851014 A3 19990113  
JP 10195352 A2 19980728

L5 ANSWER 3 OF 8 CAPLUS COPYRIGHT 1999 ACS  
PATENT NO. KIND DATE

PI US 5708095 A 19980113  
DE 19737100 A1 19980305  
GB 2317181 A1 19980318  
JP 10087754 A2 19980407

L5 ANSWER 4 OF 8 RAPRA COPYRIGHT 1999 RAPRA

L5 ANSWER 5 OF 8 USPATFULL  
PI US 5853861 19981229

L5 ANSWER 6 OF 8 USPATFULL  
PI US 5721330 19980224

L5 ANSWER 7 OF 8 USPATFULL  
PI US 5708095 19980113

L5 ANSWER 8 OF 8 USPATFULL  
PI US 5688311 19971118

s hydrophilic(40a)(vinyl pyrrolidone)

s graft and hydrophobic(40a)(acrylate or methacrylate)

L7 723 GRAFT AND HYDROPHOBIC(40A)(ACRYLATE OR METHACRYLATE)

=> s 17 and 16

s ink

L9 159563 INK

=> set high on

SET COMMAND COMPLETED

=> s 19 and 18

L10 4 L9 AND L8